

SYSTEM AND METHOD FOR CLASSIFYING NETWORK PACKETS  
WITH PACKET CONTENT

ABSTRACT OF THE DISCLOSURE

Packets are classified by content across a packet flow by sequencing packets according to packet flows through a content engine. A sequencer tracks packet flows, sending and buffering out-of-order packets to have missing packets resent. A regular expression engine determines matches of regular expressions and subexpressions with regular expressions encoded as non-deterministic finite automata with field programmable gate arrays and subexpression matches computed with a hash and determined by a hash look-up table. A tag module establishes a classification tag for a packet based on the packet's content by matching the tag with the regular expression and subexpressions of the packet.